REMARKS

In response to the Examiner's indication in the paragraphs 2 to 5 of the Office Action of March 30 2005, claims 1 to 9 have been amended.

The present invention defined in each of currently amended claims 1 to 3 is patentably distinguishable over each of the cited document "D1" (Japanese Patent Laid-Open Publication No. H06-164277) and the cited document "D2" (US 5530768) by the following reasons.

The envelope generator is defined in currently amended claim 1 as comprising:

(1a) an input terminal for having a signal inputted therein;

(1b) a first integrator for generating intermediate state of envelopes with a first attack time and a first release time in response to changes in level of the signal inputted through the input terminal to impart the intermediate state of envelopes to the signal;

(1c) a second integrator for respectively modifying the intermediate state of envelopes into final state of envelopes with a second attack time and a second release time in response to changes in level of the signal outputted from the first integrator to impart the final state of envelopes to the signal; and

(1d) a time constant distributor for receiving a desired release coefficient to distribute a first release coefficient to the first integrator and a second release coefficient to the second integrator, the first release coefficient corresponding to the first releasing time of the first integrator, the second release coefficient corresponding to the second releasing time of the second integrator; and

(1e) an output terminal for outputting the signal with the final state of envelopes therethrough, wherein

the first attack time is equal to zero,

the second attack time corresponds to a desired attack coefficient, and

the sum of the first release coefficient to be distributed to the first integrator and the second release coefficient to be distributed to the second integrator is equal to the desired release coefficient.

From the elements (1b) to (1d) of currently amended claim 1, the time constant distributor is adapted to receive a desired release coefficient to distribute a first release coefficient to the first integrator and a second release coefficient to the second integrator, the first release coefficient corresponding to the first releasing time of the first integrator, the second release coefficient corresponding to the second

releasing time of the second integrator, the sum of the first release coefficient to be distributed to the first integrator and the second release coefficient to be distributed to the second integrator being equal to the desired release coefficient, the first integrator is adapted to receive the first release coefficient from the time constant distributor, and to generate intermediate state of envelopes with a first attack time equal to zero and a first release time represented by the first release coefficient received from the time constant distributor in response to changes in level of the signal inputted through the input terminal to impart the intermediate state of envelopes to the signal, and the second integrator is adapted to receive the first release coefficient from the time constant distributor, and to respectively modify the intermediate state of envelopes into final state of envelopes with a second attack time represented by a desired attack coefficient and a second release time represented by the first release coefficient received from the time constant distributor in response to changes in level of the signal outputted from the first integrator to impart the final state of envelopes to the signal.

Therefore, the envelope generator defined in currently amended claim 1 can allow the second attack time of the second integrator to be changed with the desired attack coefficient, and allow the first and second release times of the first and second integrators to be changed with a desired release coefficient.

In other words, the envelope generator defined in currently amended claim 1 can output the signal modified with the desired attack coefficient and the desired release coefficient.

On the other hand, the cited document D1 fails to disclose that the time constant distributor is adapted to receive a desired release coefficient to distribute a first release coefficient to the first integrator and a second release coefficient to the second integrator, the first release coefficient corresponding to the first releasing time of the first integrator, the second release coefficient corresponding to the second releasing time of the second integrator, the sum of the first release coefficient to be distributed to the first integrator and the second release coefficient to be distributed to the second integrator being equal to the desired release coefficient. The envelope generator defined in currently amended claim 1 is completely different in construction from the disclosure of the cited document D1.

Further, the envelope generator defined in currently amended claim 1 can obtain the advantages that the second attack time of the second integrator can be changed with the desired attack coefficient, and the first and second release times of the first and second integrators can be changed with a desired release coefficient.

The time constant control unit disclosed in the cited document D1, however, cannot expect the advantages of the envelope generation method defined in currently amended claim 1, resulting from the fact that the cited document D1 fails to disclose that the time constant distributor is adapted to receive a desired release coefficient to distribute a first release coefficient to the first integrator and a second release coefficient to the second integrator, the first release coefficient corresponding to the first releasing time of the first integrator, the second release coefficient corresponding to the second releasing time of the second integrator, the sum of the first release coefficient to be distributed to the first integrator and the second release coefficient to be distributed to the second integrator being equal to the desired release coefficient.

Document D2 was cited merely to show zero value attack times.

It will, therefore, be appreciated from the foregoing description about the envelope generator defined in currently amended claim 1 being completely different in construction and advantages from the disclosure of each of the cited documents D1 and D2, that the envelope generator defined in currently amended claim 1 is patentably distinguishable over the disclosure of each of the cited documents D1 and D2.

The present invention defined in each of currently amended claims 2 and 3 is patentably distinguishable over each of the cited document D1 and the cited document D2 by the following reasons.

The audio compression apparatus defined in currently amended claim 2 is partially constituted by an envelope generator defined in currently amended claim 1 which is believed to be patentably distinguishable over the disclosure of each of the cited documents D1 and D2 as will be understood from the previously mentioned reasons. It is, therefore, believed that currently amended claim 2 is patentably distinguishable over the disclosure of each of the cited documents D1 and D2 based on the same reasons as above.

The audio expansion apparatus defined in currently amended claim 3 is partially constituted by an envelope generator defined in currently amended claim 1 which is believed to be patentably distinguishable over the disclosure of each of the cited documents D1 and D2 as will be understood from the previously mentioned reasons. It is, therefore, believed that currently amended claim 3 is patentably distinguishable over the disclosure of each of the cited documents D1 and D2 based on the same reasons as above.

The present invention defined in currently amended claim 4 is patentably distinguishable over each of the cited document D1 and the cited document D2 by the

following reasons.

The envelope generation method is defined in currently amended claim 4 as comprising:

(2a) a first step of having a signal inputted;

(2b) a second step of generating intermediate state of envelopes with a first attack time and a first release time in response to changes in level of the signal inputted in the first step to impart the intermediate state of envelopes to the signal;

(2c) a third step of respectively modifying the intermediate state of envelopes into final state of envelopes with a second attack time and a second release time in response to changes in level of the signal outputted in the second step to impart the final state of envelopes to the signal; and

(2d) a fourth step of outputting the signal with the final state of envelopes, wherein

(2e) a fifth step of receiving a desired release coefficient to distribute a first release coefficient and a second release coefficient, the first release coefficient corresponding to the first releasing time, the second release coefficient corresponding to the second releasing time,

wherein

the first attack time is equal to zero,

the second attack time corresponds to a desired attack coefficient, and

the sum of the first release coefficient to be distributed and the second release coefficient to be distributed is equal to the desired release coefficient.

From the elements (2b), (2c), and (2e) of currently amended claim 4, it will be understood that the envelope generation is executed with the desired attack coefficient and the desired release coefficient. This means that the second attack time is changed with the desired attack coefficient, and the first and second release times are changed with a desired release coefficient.

The cited document D1 discloses a time constant control unit 20 which comprises first and second integrating circuits 21 and 22 for imparting first and second time constants to respective input signals, an absolute value calculating circuit 24 for calculating the absolute value of the difference between an output signal outputted from the first integrating circuit 21 and an output signal outputted from the second integrating circuit 22 to control a third integrating circuit 25 on the basis of the calculated absolute value. The cited document D1, however, fails to disclose that the fifth step is of receiving a desired release coefficient to distribute a first release coefficient and a second release coefficient, the first release coefficient corresponding

to the first releasing time, the second release coefficient corresponding to the second releasing time. The envelope generation method defined in currently amended claim 4 is completely different in construction from the disclosure of the cited document D1.

Further, the envelope generation method defined in currently amended claim 4 can obtain the advantages that the second attack time can be changed with the desired attack coefficient, and the first and second release times can be changed with a desired release coefficient. The time constant control unit disclosed in the cited document D1 cannot expect the advantages of the envelope generation method defined in currently amended claim 4, resulting from the fact that the cited document D1 fails to disclose the fails to disclose that the fifth step is of receiving a desired release coefficient to distribute a first release coefficient and a second release coefficient, the first release coefficient corresponding to the first releasing time, the second release coefficient corresponding to the second releasing time.

Document D2 was cited merely to show zero value attack times.

It will, therefore, be appreciated from the foregoing description about the envelope generation method defined in currently amended claim 4 being completely different in construction and advantages from the disclosure of each of the cited documents D1 and D2, that the envelope generation method defined in currently amended claim 4 is patentably distinguishable over the disclosure of each of the cited documents D1 and D2.

The present invention defined in each of currently amended claims 5 and 6 is patentably distinguishable over each of the cited document D1 and the cited document D2 by the following reasons.

The audio compression method defined in currently amended claim 5 is partially constituted by an envelope generation method defined in currently amended claim 4 which is believed to be patentably distinguishable over the disclosure of each of the cited documents D1 and D2 as will be understood from the previously mentioned reasons. It is, therefore, believed that currently amended claim 5 is patentably distinguishable over the disclosure of each of the cited documents D1 and D2 based on the same reasons as above.

The audio expansion method defined in currently amended claim 6 is partially constituted by an envelope generation method defined in currently amended claim 4 which is believed to be patentably distinguishable over the disclosure of each of the cited documents D1 and D2 as will be understood from the previously mentioned reasons. It is, therefore, believed that currently amended claim 6 is patentably distinguishable over the disclosure of each of the cited documents D1 and D2 based

on the same reasons as above.

The present invention defined in currently amended claim 7 is patentably distinguishable over each of the cited document D1 and the cited document D2 by the following reasons.

The recordable medium is defined in currently amended claim 7 as comprising:

(3a) a first step of having a signal inputted;

(3b) a second step of generating intermediate state of envelopes with a first attack time and a first release time in response to changes in level of the signal inputted in the first step to impart the intermediate state of envelopes to the signal;

(3c) a third step of respectively modifying the intermediate state of envelopes into final state of envelopes with a second attack time and a second release time in response to changes in level of the signal outputted in the second step to impart the final state of envelopes to the signal; and

(3d) a fourth step of outputting the signal with the final state of envelopes, wherein

(3e) a fifth step of receiving a desired release coefficient to distribute a first release coefficient and a second release coefficient, the first release coefficient corresponding to the first releasing time, the second release coefficient corresponding to the second releasing time,

wherein

the first attack time is equal to zero,

the second attack time corresponds to a desired attack coefficient, and

the sum of the first release coefficient to be distributed and the second release coefficient to be distributed is equal to the desired release coefficient.

From the elements (3b), (3c), and (3e) of currently amended claim 7, it will be understood that the envelope generation program stored in the recordable media is executed with the desired attack coefficient and the desired release coefficient. This means that the second attack time is changed with the desired attack coefficient, and the first and second release times are changed with a desired release coefficient.

The cited document D1 discloses a time constant control unit 20 which comprises first and second integrating circuits 21 and 22 for imparting first and second time constants to respective input signals, an absolute value calculating circuit 24 for calculating the absolute value of the difference between an output signal outputted from the first integrating circuit 21 and an output signal outputted from the second integrating circuit 22 to control a third integrating circuit 25 on the basis of

the calculated absolute value. The cited document D1, however, fails to disclose that the fifth step is of receiving a desired release coefficient to distribute a first release coefficient and a second release coefficient, the first release coefficient corresponding to the first releasing time, the second release coefficient corresponding to the second releasing time. The recordable medium defined in currently amended claim 7 is completely different in construction from the disclosure of the cited document D1.

Further, the recordable medium defined in currently amended claim 7 can obtain the advantages that the second attack time can be changed with the desired attack coefficient, and the first and second release times can be changed with a desired release coefficient. The time constant control unit disclosed in the cited document D1 cannot expect the advantages of the recordable medium defined in currently amended claim 7, resulting from the fact that the cited document D1 fails to disclose the fails to disclose that the fifth step is of receiving a desired release coefficient to distribute a first release coefficient and a second release coefficient, the first release coefficient corresponding to the first releasing time, the second release coefficient corresponding to the second releasing time.

Document D2 was cited merely to show zero value attack times.

It will, therefore, be appreciated from the foregoing description about the recordable medium defined in currently amended claim 7 being completely different in construction and advantages from the disclosure of each of the cited documents D1 and D2, that the recordable medium defined in currently amended claim 7 is patentably distinguishable over the disclosure of each of the cited documents D1 and D2.

The present invention defined in each of currently amended claims 8 and 9 is patentably distinguishable over each of the cited document D1 and the cited document D2 by the following reasons.

The recordable medium defined in currently amended claim 8 is partially constituted by the recordable medium defined in currently amended claim 7 which is believed to be patentably distinguishable over the disclosure of each of the cited documents D1 and D2 as will be understood from the previously mentioned reasons. It is, therefore, believed that the currently amended claim 8 is patentably distinguishable over the disclosure of each of the cited documents D1 and D2 based on the same reasons as above.

The recordable medium defined in currently amended claim 9 is partially constituted by the recordable medium defined in currently amended claim 7 which is believed to be patentably distinguishable over the disclosure of each of the cited

documents D1 and D2 as will be understood from the previously mentioned reasons. It is, therefore, believed that the currently amended claim 9 is patentably distinguishable over the disclosure of each of the cited documents D1 and D2 based on the same reasons as above.

In view of the foregoing description, it is respectfully submitted that the present application is thus in condition for allowance.

If any fees are required by this communication, please charge such fees to our Deposit Account No. 16-0820, Order No. 33732.

Respectfully submitted,

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Date: June 30, 2005